

Uplifting Onion

Design research

Simac project

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Intro

For this research, it is important to figure out design principles and guidelines for the project. Although Simac already has design elements on the current narrowcasting implementation, this research document describes the process of discovering the specific design required for the new Simac narrowcasting system.

Research goal

Find out in what way a narrowcasting platform within Simac should be designed to make sure engagement and recognition is as high as possible.

Research question

How should a narrowcasting platform be designed in order to maximize engagement and recognition?

Methods

For this research, the method applied will be design pattern research. By applying well known and substantiated design principles the project will not be held back by poor design decisions.

Results – design principles

Human Interface Guidelines (Apple)

Accessibility

Simplicity:

Perceivability: content can be perceived through sight, hearing or touch

Personalization: adapting to environmental variations (device specifications)

Text display:

always maintain consistent information hierarchy

prefer regular or heavy font weights: better visibility

ensure font legibility

avoid full text justification

Color and effects:

Don't rely solely on color to convey information: use labels or shapes to help everyone perceive it

Avoid using color combinations as the only way to distinguish between two states or values; when it is done use additional indicators so everyone can perceive the information



Use strongly contrasting colors to improve readability; higher contrast of visual elements improves usability in more situations

Avoid requiring animations unless they are essential for your experience

Material Design (Google)

<https://material.io/blog/material-design-for-large-screens>

Spectrum (Adobe)

Principles: Building for a wide audience: readability, accessibility

inclusive design:

- context-sensitive help to provide support through many kinds of interactions

- targets large enough to interact with, label and describe all objects

- avoid distractions: not placing animations near paragraphs, giving users option to disable animations

- common components for well-defined tasks instead of new ones

- involve marginalized groups of users in testing and feedback

<https://www.w3.org/TR/2018/REC-WCAG21-20180605/#abstract> - Web Content Accessibility Guidelines (WCAG)

Principles of visual design

Gestalt principles

Designing for TV screens

Projecting the design

Because TV screens use different specifications from desktop monitors it is important to test your UI on a TV while designing, or better, design it directly on it.

Ambience

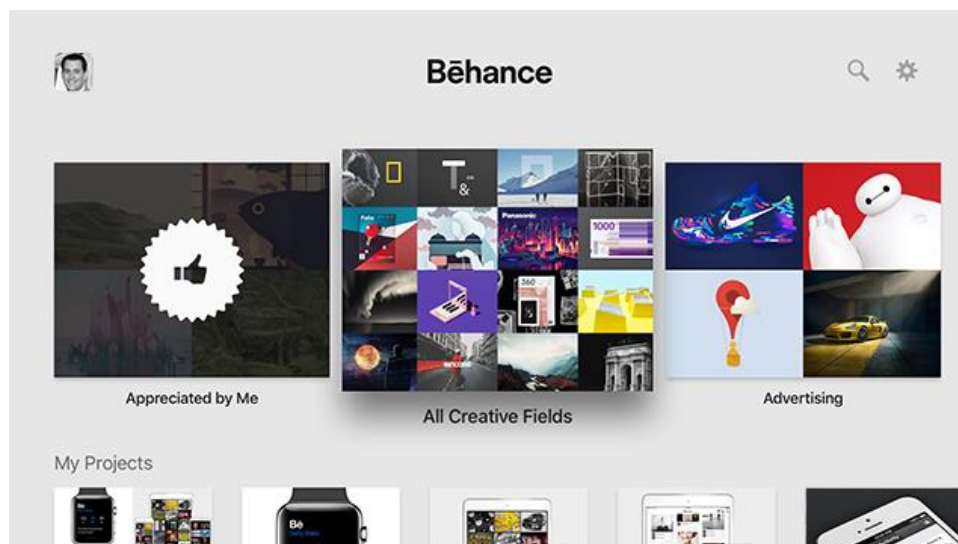
One thing to keep in mind when designing for TV screens is different light conditions. These can range from lots of bright light during the day to very little light during the night. Because of that contrast and legibility are essential. It is good to test your design in different conditions to ensure that it remains readable.

Distance

Even though television screens are bigger than desktop monitors or mobile devices, they are also used from further away (~10 feet / 3m distance). Because of that, the term “10-foot UI” is also used.

Ensure legibility from greater distances by using a clean design, focused on the essentials, the amount of information should be closer to what can be displayed on a mobile phone rather than a desktop monitor.

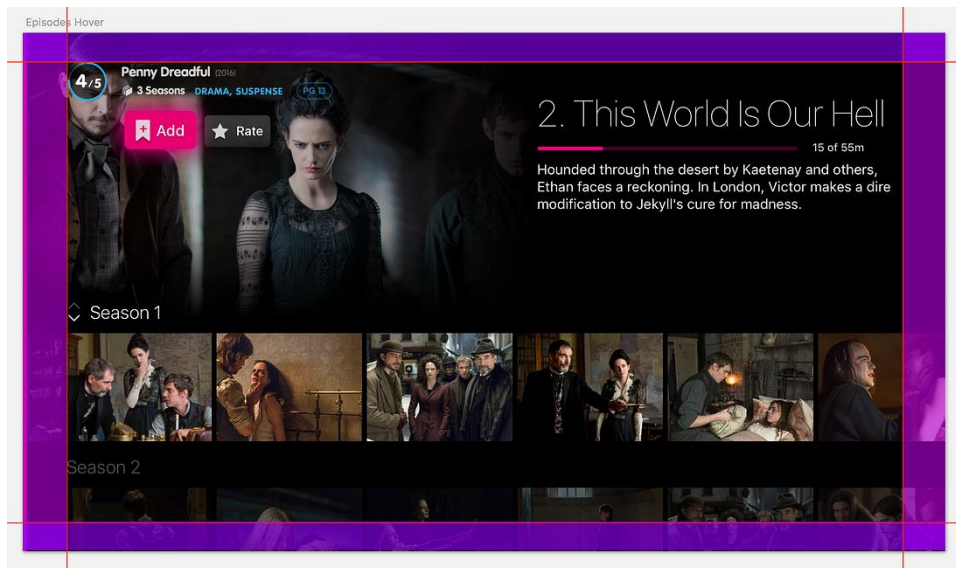
TVs are also used in a more relaxed fashion than computers or mobile devices; the UI should not require too much attention or precision from the user. Instead, go for simplicity and clarity and avoid displaying too much information on the screen. Elements need to be large and have enough space in between to be distinguished and read from a distance. More information can be revealed through scrolling or progressive disclosure.



Overscan

Not all TVs display content to the edges of the screen, meaning that some content could overflow outside the visible screen area.

When designing for TVs, safe areas are used to prevent overflow, they differ depending on the platform but generally include a margin of between 5% to 15%.

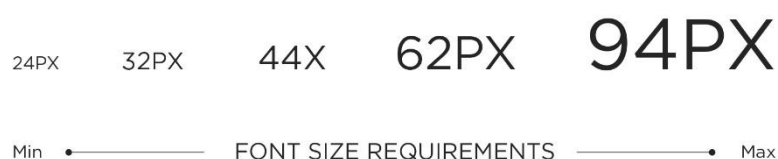


60px by 90px margin used by Apple TVOS

Typography

Because of the distance from which TVs are normally used, the recommended font size should normally be at least 24px to accommodate most types of users. The smallest readable font size would be 18px and should only be used for nonessential labels such as eyebrow tags.

Custom typefaces are supported by all TVs, but they can be difficult to read depending on the font. If custom fonts are used, they should be tested from a distance to ensure legibility.

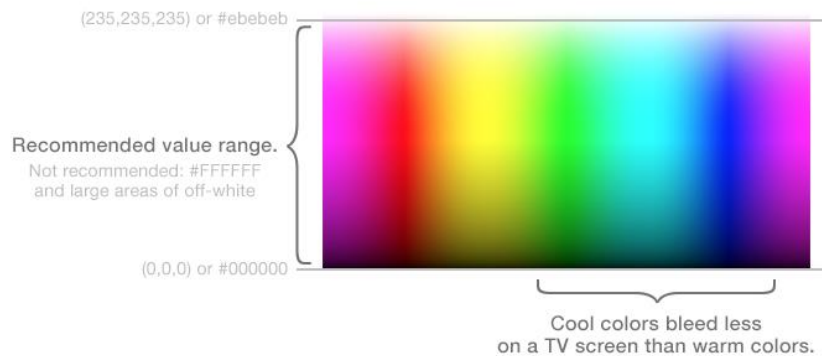


Colors

TV screens have higher gamma than desktop or mobile displays; This makes bright or saturated colors look brighter, especially for warm colors.

Another aspect to keep in mind regarding color is the smaller gamut available for TVs compared to computer monitors. This means that the range of color available will also be smaller.

Avoid very bright or oversaturated colors (especially reds); they can be harsh on the eyes, especially in dimly lit areas. Pure white is also to be avoided, as the bright light can feel uncomfortable to the eyes. Less bright colors as shown in the image below are preferred instead.



Gradients and deep blurs should also be tested since the limited color range can cause bleeding to occur, especially with warm colors. Bleeding is also possible with sharp edges between highly contrasting colors or with very warm colors such as very saturated reds or yellows.

<https://www.toptal.com/designers/ui/tv-ui-design>

<https://uxdesign.cc/guidelines-designing-for-television-experience-524f19ab6357>

<https://marvelapp.com/blog/designing-for-television/>

<https://developer.apple.com/design/human-interface-guidelines/platforms/designing-for-tvos/#best-practices>

<https://tv.withgoogle.com/design-principles/designing-for-tv.html>

<https://developer.amazon.com/docs/fire-tv/design-and-user-experience-guidelines.html#10-foot-ui>

Conclusion

- Testing layout / elements / colors on TV screens
- Keep in mind differences between TV and computer monitors
- Lack of interactivity – some aspect may differ from usual advice, also keep in mind how the narrowcasting will be used (casual in short bursts; quick source of information)

Results – brand style guide

For this section, the goal is to figure out how other design elements should look. This includes color use, font type, font size, spacing and other things.

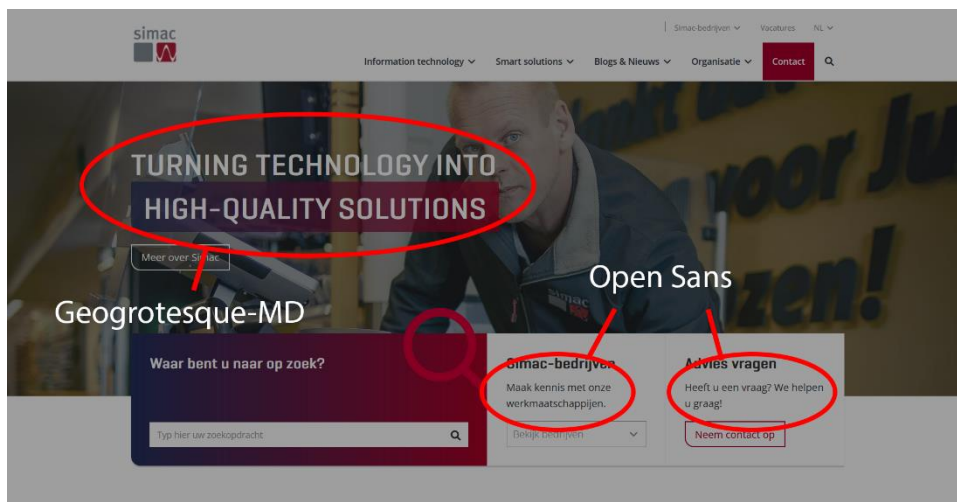
Based on the previous findings, text needs to be bigger than on for instance websites, due to the size and distance from the narrowcasting displays.

For the font type, there is a lot of research as to whether or not to use a serif-font.

<https://www.nngroup.com/articles/serif-vs-sans-serif-fonts-hd-screens/>

The research is inconclusive on this subject. Usually, serif fonts were very common in history, due to readability concerns with sans-serif. However, with current day displays and mostly demise of printed material, serif fonts do not have a meaningful advantage. Therefore, there is no reason to largely favor one over the other for readability.

On their website, Simac uses a combination of Open Sans and Geogrotesque. Geogrotesque is the title font, which we will also use for titles. Open Sans will be our main font for everything besides titles. This is both to adhere to Simac style and because, at least for Open Sans, the readability has been proven by its wide usage.



Color

In terms of color, Simac seems to have somewhat of a defined styleguide. Although we do not have this styleguide in our possession as of yet, some basic facts can be extrapolated from their website and current narrowcasting implementation.

Simac Gradient

232e5b

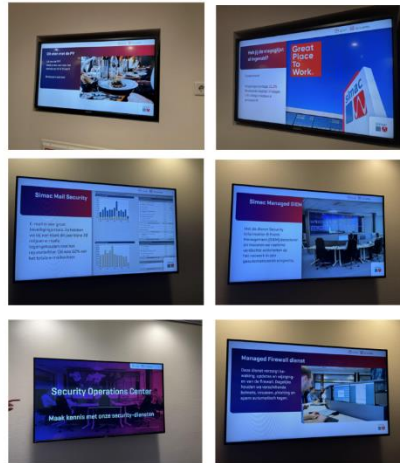
a70228

simac



7f8993

c40127

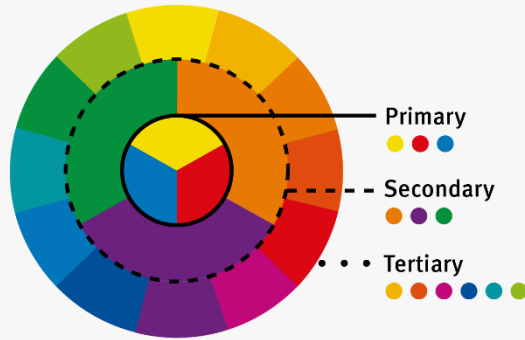


The interesting thing about Simac's style is the fact that the logo uses different colors than the gradient. The logo colors also appear nowhere else. In contrast, the gradient colors appear all over their website and narrowcasting screens.

By looking in more detail, it becomes obvious that the red tint in the gradient and in Simac's logo are supposed to be similar, though they are not the same. Also, the logo does not adhere to any color theory, while the gradient adheres to the analogous or low contrast color theory. The colors are all very close to each other on the color wheel, giving a low contrast appearance.

<https://www.nngroup.com/articles/color-enhance-design/>

The Color Wheel



Primary
Yellow, Red, Blue

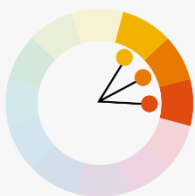


Secondary
Orange, Purple, Green
(Primary + Primary)



Tertiary
Ex. Yellow-orange
(Primary + Secondary)

Color Harmonies



Analogous



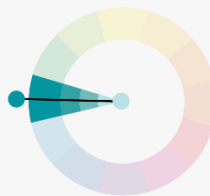
Complementary



Triadic



Split
Complementary



Monochromatic

The color gradient Simac uses consists of dark colors that are not too tiring to look at. Based on the previous section, this is an important aspect of narrowcasting.

To give a more 'Simac' feeling, the gradient colors will be kept and used throughout this project. Of these, the focus will be on the ends of the spectrum. This means that we will mainly use the colors #232f5c and #a80127. If an extra accent is needed, the middle color will be used which is #661841. If more refinement is needed, it is picked from the gradient and will be in between #232f5c and #a80127.

The only exception is for some titles. Titles can be a specific grey or white, but can also have a specific red color, similar to Simac website style. This color is similar to the gradient, but still slightly outside the range, as #a7002b.

Text on a dark background will use a different white color than Simac does on their website. Since Simac uses bright white, this might be a tiring effect to look at on the displays. Therefore, we will use a slightly less bright white color to avoid this effect. The color to be used is #F2F2F2. Text on a light background will use #373f46. Text can also be colored as noted in the previously defined spectrum. Usually and preferably, the background is the full gradient, as Simac does themselves as well, though some dark backgrounds are also allowed. The gradient can also be used as an overlay, as can a dark overlay if necessary.

Element properties

Simac uses a lot of the same elements on their website and screens. These usually consists of cards with information. These cards are either

Between all elements, a minimum margin of 10px is required.

Another aspect to be considered is the potential inclusion of buttons and/or cards in styling. These mimic Simac style as well, and have a border radius of 15px on a single side. This side is the bottom left. The others have sharp edges.

Box shadows are applied on cards and buttons according to Simac web standards. This color is the same as the regular text color, #373f46, with an opacity of 25%. The shadow properties are 0px x-offset, 2px y-offset and a blur radius of 1px.

The logo colors do not seem to fit with the full style of Simac, and its colors will not be used. The logo itself will be included however, as Simac does on their current narrowcasting implementation.

48px — **An important title on a dark or gradient background**
10px —
32px — **A less important title on a dark or gradient background**
10px —
16px — Regular text on a dark or gradient background
Single border radius of 15 px

Drop shadow of 2px y-offset and 1px blur

48px — **An important title on a light background**
10px —
32px — **A less important title on a dark or gradient background**
10px —
16px — Regular text on a dark or gradient background
Single border radius of 15 px

Drop shadow of 2px y-offset and 1px blur

Conclusion

In conclusion, Simac has a clear identity from which we can launch our project. The Simac style is used on their website, but also for instance their narrowcasting screens. Using some TV guidelines combined with the Simac brand, a narrowcasting interface can be designed which resembles the current implementation, though with some TV-specific improvements.